

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

Claims 1-12 (canceled).

Claim 13 (currently amended): A transgenic plant cell transformed by an OBP antisense coding nucleic acid expression vector, wherein expression of said vector in the plant cell results in an increase in the size of the resulting plant as compared to a corresponding wild-type variety of plant, and wherein the OBP is ~~a nucleotide sequence selected from the group consisting of:~~

- (a) the nucleotide sequence shown in SEQ ID NO:1, or the complement thereof; and
- (b) ~~a nucleotide sequence that hybridizes to said nucleotide sequence of (a) under a wash stringency equivalent to 0.1X SSC, 0.1% SDS, at 50°C, and which encodes a polypeptide having activity differing from that of SEQ ID NO: 1 by about 40% or less;~~
- (c) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (a), but which is degenerate in accordance with the degeneracy of the genetic code; ~~and~~
- (d) ~~a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (b), but which is degenerate in accordance with the degeneracy of the genetic code.~~

Claim 14 (canceled).

Claim 15 (previously presented): The transgenic plant cell of claim 13, wherein the OBP is SEQ ID NO: 1

Claim 16 (canceled).

Claim 17 (original): The transgenic plant cell of claim 13, wherein the resulting plant is a monocot.

Claim 18 (original): The transgenic plant cell of claim 13, wherein the resulting plant is a dicot.

Claim 19 (original): The transgenic plant cell of claim 13, wherein the resulting plant is selected from the group consisting of maize, wheat, rye, oat, triticale, rice, barley, soybean, peanut, cotton, rapeseed, canola, manihot, pepper, sunflower, tagetes, solanaceous plants, potato, tobacco, eggplant, tomato, Vicia species, pea, alfalfa, coffee, cacao, tea, Salix species, oil palm, coconut, perennial grass, and forage crops.

Claim 20 (currently amended): A transgenic plant comprising a plant cell according to ~~any one of~~ claim 16.

Claim 21 (currently amended): A seed produced by a transgenic plant comprising a plant cell according to claim ~~[[16]]~~ 13, wherein the seed is true breeding for an increase in the size of a daughter plant as compared to a wild-type variety of plant cell.

Claims 22-30 (canceled).

Claim 31 (currently amended): A recombinant antisense expression vector comprising:

- (a) a promoter, said promoter being functional in a plant cell; and
- (b) an Arabidopsis thaliana OBP3 antisense coding nucleic acid, said promoter being operably linked to said OBP3 antisense coding nucleic acid and said antisense coding nucleic acid oriented with respect to said promoter such that the RNA produced is complementary in nucleotide sequence and ~~capable of hybridizing under a wash stringency equivalent to 0.2X SSC, 0.1% SDS at 50°C~~ to mRNA encoding Arabidopsis thaliana OBP3, wherein said OBP3 antisense coding nucleic acid comprises a

~~nucleotide sequence having at least 70% homology to SEQ ID NO: 1 and
encoding conservative amino acids substitutions.~~

Claims 32-42 (canceled)

Claim 43 (currently amended): A method for producing a transgenic plant having increased size as compared to the corresponding wild-type plant, said method comprising:

- (a) transforming plant cells by introducing ~~any one of~~ the recombinant antisense expression ~~vectors~~ vector as set forth in claim 31;
- (b) producing plants from said transformed cells and
- (c) selecting a whole plant exhibiting increased size.

Claims 44-45 (canceled).

Claim 46 (currently amended): A method for altering the size of the aerial portion of a plant without dwarfing root tissue, said method comprising:

- (a) introducing ~~any one of~~ the recombinant antisense expression ~~vectors~~ vector as set forth in claim 31 into a plant cell;
- (b) regenerating the plant cell into a transgenic plant;
- (c) evaluating the whole plant for an increase in size by comparing the plant obtained by introducing the nucleic acid molecule with the size of a corresponding wild-type plant.

Claims 47-52 (canceled).

Claim 53 (original): The method of claim 43, wherein the transgenic plant exhibits increased aerial tissue growth as compared to the corresponding wild-type plant.

Claims 54-67 (canceled).

Claim 68 (currently amended): A transgenic plant cell transformed by an antisense nucleic acid sequence complementary to a nucleic acid sequence encoding an OBP3 polypeptide, wherein expression of said antisense nucleic acid sequence in the plant cell results in an increase in the size of a resulting plant as compared to a corresponding wild-type variety of plant, and wherein the nucleic acid sequence encoding the polypeptide is selected from the group consisting of:

- (a) the nucleotide sequence shown in SEQ ID NO:1, or the complement thereof; and
- (b) ~~a nucleotide sequence that hybridizes to said nucleotide sequence of (a) under a wash stringency equivalent to 0.1X SSC to 2.0X SSC, 0.1% SDS, at 50-65 C, and which encodes a polypeptide having activity differing from that of Arabidopsis thaliana OBP3 by about 40% or less;~~
- (c) a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (a), but which is degenerate in accordance with the degeneracy of the genetic code; and
- (d) ~~a nucleotide sequence encoding the same amino acid sequence as said nucleotide sequence of (b), but which is degenerate in accordance with the degeneracy of the genetic code.~~

Claim 69 (currently amended): The transgenic plant cell of claim 68, wherein the nucleic acid sequence encoding the OBP3 polypeptide is SEQ ID NO: 1. ~~nucleotide sequence in (b) encodes a polypeptide selected from the group consisting of:~~

- (a) ~~a polypeptide having activity differing from that of Arabidopsis thaliana OBP3 by about 30% or less;~~
- (b) ~~a polypeptide having activity differing from that of Arabidopsis thaliana OBP3 by about 20% or less;~~
- (c) ~~a polypeptide having activity differing from that of Arabidopsis thaliana OBP3 by about 10% or less.~~

Claim 70 (original): A transgenic plant comprising a plant cell according to claim 68.

Claim 71 (original): A seed produced by a transgenic plant comprising a plant cell according to claim 70.

Claims 72-73 (canceled).

Claim 74 (currently amended): A recombinant antisense expression vector comprising:

- a) a promoter, said promoter being functional in a plant cell; and
- (b) an antisense coding nucleic acid sequence complementary to a nucleic acid sequence encoding an OPB3 polypeptide, wherein said antisense nucleic acid sequence is operably linked to said promoter and is oriented with respect to said promoter such that RNA produced by said antisense coding nucleic acid sequence is complementary to ~~and capable of hybridizing under a wash stringency equivalent to 0.2X SSC, 0.1% SDS at 50°C to~~ mRNA encoding OPB3, wherein said OPB3 antisense coding nucleic acid comprises a nucleotide sequence ~~having at least 70% homology to a nucleotide sequence complementary to SEQ ID NO:1 and encoding conservative amino acids substitutions.~~

Claims 75-76 (canceled).

Claim 77 (original): The recombinant vector of claim 76, wherein the promoter is an inducible promoter.

Claim 78 (original): The recombinant vector of claim 77, further comprising an enhancer element.

Claim 79 (original): The recombinant vector of claim 78, wherein the enhancer element is from a CaMV35S promoter.

Claims 80-88 (canceled).